Essentials — Dynamic Belaying

The Art of the Soft Catch

Photo by François Lebeau

Lead climbing is a two-person sport. Arguably, the climber has the easy job—they climb and try not to let go. The belayer has the hard job of managing the rope and continuously planning for a fall. They are constantly evaluating the variables, adjusting the slack in the rope to make sure there is enough rope for the leader to do the moves and make efficient clips, while planning for either a short catch to keep the climber from hitting a ledge or a long catch to clear a roof or avoid a hard swing into the wall.

As the belayer, it's our job to understand the system and how our reactions change the dynamics of the fall. The belayer can influence two aspects of a fall: the length (how far the climber falls) and the hardness/softness (the rate at which the climber slows). This is done with a combination of adjusting slack and moving into (or away from) the catch. For the purposes of this discussion, we're focusing on sport climbs, but the same principles generally apply on well-protected traditional rock climbs.

When the leader is low to the ground or is at risk of hitting a ledge, tree, or other obstacle, the belayer must limit slack and be prepared to give a short, immediate catch. In extreme cases, the belayer may even pull rope out of the system or move quickly away from the rock as the climber is falling to reduce the length of a fall. (For an example of how a quick-thinking belayer likely saved a leader from serious injury in this way in 2020, see this report from New York's Shawangunks.) Note that a short catch is not necessarily a hard catch; in some cases, it is possible and appropriate to soften a short catch.

When the climber is well above the ground and no obvious obstacles threaten, a softer and longer catch is appropriate. A soft, longer catch can reduce the whip back into the wall and give the falling leader time to spot their landing and prepare to absorb any impact with their legs. Seasoned climbers are often able to correct poor body positioning during a fall, when given enough time to react.

Overhanging climbs may create an illusion of "nothing to hit," but in reality, the steeper the climb, the more the falling climber will pendulum back toward the wall, given a tight belay. Even falls on vertical and lower-angle climbs often benefit from a softer catch, as climbers may fall or push away from the wall, creating a small pendulum that will whip them into the wall if the belay is tight.

The closer the climber is to their last bolt, the more important it is to soften and lengthen a catch (when it is safe to do so). With a tight, short catch, the climber will come into the wall quickly, giving them little time to react.

Though every fall is different, in general, softening the catch provides more benefits than adding slack. To achieve a softer catch, the belayer moves toward the climber as the rope tightens during the fall, lengthening but slowing the arrest. The belayer anticipating a fall can squat and then stand up and/or move toward the cliff as the rope becomes tight. Sometimes it is enough for the belayer to simply relax and allow themselves to be pulled into the fall. The belayer should be positioned underneath the first bolt so they don't swing if they're pulled into the air.

Some belayers jump up while catching a fall, but the repercussions of mistiming the jump outweigh

the benefits—jumping too early can give an even harder catch to the falling leader. In most cases, actively standing up from a squatted position when the rope tightens provides plenty of movement to soften a catch.

Slack is also an important consideration for the belayer; more slack means a longer catch, but it does not necessarily mean a softer catch. The amount of slack in the system affects how far the climber will free-fall before the belayer counters with their weight. More slack reduces the angle of rotation (between the falling climber and their last protection), but also means they will be falling faster (with more force) when the fall is arrested. When the climber is high enough to be out of ground fall potential, a good rule of thumb is to maintain a shallow dip in the belay rope between the belayer and the first bolt. Usually, the rope should not droop below the knees.

Many other variables affect the dynamics of a fall, and before each climb the leader and belayer should briefly discuss any special circumstances. For example, should the belayer pay out a bit more slack as the leader clears a roof? Should they take in slack for a crux above a ledge? Other things to discuss and consider:

- **Weight difference between belayer and climber**. If the belayer is lighter than the climber, they may decrease how much they move into a catch and leave less slack out. The heavier the belayer (compared to the climber), the more important it is for them to actively soften the arrest and prevent an abrupt swing into the rock.

- **Rope characteristics.** Climbing ropes vary considerably, and a rope rated higher for “dynamic elongation” will give a softer catch but also stretch more, increasing the length of the fall.

- **Belay device.** Assisted-braking devices, like the Grigri, will arrest a fall faster and with less slippage than a tube-style device, like an ATC. The belayer using an assisted-braking device needs to be more conscious of softening the catch.

- **Friction in the system.** A rope zigzagging through draws or over rock features can emphasize a pendulum effect in a fall. Longer draws help reduce friction when there are abrupt angle changes on a climb, such as below a roof.

Especially if you’re climbing with someone new, talk about your preferences for the belay as well as any issues raised by specific climbs. With practice and care, partners can quickly learn to avoid many dangerous or uncomfortable falls.

Lindsay Auble lives and climbs at the Red River Gorge, Kentucky, where dynamic belaying is an essential skill.

Images

Article Details

Author	Lindsay Auble
Publication	ANAM
Volume	12
Issue	74
Page	
Copyright Date	2021
Article Type	Accident reports